

## REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 1-9 remain pending. By this communication, claims 1 and 8 are amended for clarity.

In numbered paragraph 2 on page 2 of the Office Action, claims 1-9 stand rejected under 35 U.S.C. §103(a) for alleged unpatentability over *Pozgay et al* (U.S. Patent Publication No. 007079815) in view of *Saxler* (U.S. Patent Publication No. 007030428) and further in view of *Duffalo et al* (U.S. Patent No. 4,890,069). Applicant respectfully traverses this rejection.

As stated in a previous response, Applicant's exemplary Figure 1 illustrates a radar system that includes a first switch 105, GaN amplifiers 110a, 110b, and 110c, and a second switch 115. A switch controller 140 controls the first and second switches 105 and 115 to connect an antenna to transmit and receive paths. Amplifiers 110a, 110b, and 110c are included in a circuit that is configured such that a drain and a gate of the amplifiers have a common source. As described in paragraph [0011] of Applicant's disclosure, a bias current is provided by DC feed 120 to a connection point between the gate of each transistor 110a, 110b, and 110c. DC feed 130 provides a bias on the drain of transistors 110a, 110b, and 110c. This configuration enables the amplifier circuits to achieve lower noise figures over all frequencies.

Independent claim 1 broadly encompasses the aforementioned features by reciting, among other elements, an AlGaN amplifier connected to an antenna, wherein the amplifier includes a plurality of AlGaN amplifiers connected such that each amplifier has a common drain connection and a common gate connection. The

combination of the *Pozgay* publication in view of the *Saxler* and *Duffalo* patents fails to establish a *prima facie* case of obviousness with respect to Applicant's claims.

In numbered paragraph 2 beginning on page 2 of the Office Action, the Examiner alleges that the combined teachings of the *Pozgay* publication and the *Saxler* patent teach every element recited in Applicant's claims except for the plurality of amplifiers with drain connections and common gate connections. The Examiner relies on the *Duffalo* patent in an effort to remedy this deficiency.

The *Duffalo* patent discloses a microwave circuit consisting of three stages. Each stage includes a field effect transistor (FET). For example, in a matching circuit 30, FET 34 has a source that receives a signal from an input pin 15 and is coupled to a grounded resistor 32. The drain of FET 34 is coupled to a conductor 36 and also to an independent path to a gain circuit 40. The gain circuit 40 includes an FET 44 having its gate coupled to the drain of FET 34 through a capacitor 41. The source of FET 44 is coupled to a parallel combination of resistor 47 and capacitor 48. The drain of FET 44 is coupled to a gain circuit 50. The gain circuit 50 includes an FET 54. The gate of FET 54 is coupled to the drain of FET 44 through a blocking capacitor 51. The source of FET 54 is coupled to a capacitor 58 and a pin 19. The drain of FET 54 is open and is coupled to output pin 17. The drains of FET 34 and 44 are coupled to a bias node 77.

The *Duffalo* patent fails to disclose or suggest that each amplifier has a common drain connection and a common gate connection as recited in Applicant's claims. Rather, the *Duffalo* patent discloses that the drains of FET 34 and 44 are both coupled to bias node 77. Thus, because only two of the three transistors provided in the *Duffalo* patent share, at most, a common drain, one of ordinary skill

would not look to the *Duffalo* patent to remedy the deficiencies of the *Pozgay* publication and *Saxler* patent as alleged by the Examiner. Even assuming *arguendo* that these references are combinable, the resulting device or circuit would merely have the drains of two of its transistors connected at a common node. There appears to be no teaching or suggestion with respect to Applicant's claimed common gate connection of the plurality of transistors.

In summary, the *Pozgay* publication and the *Saxler* and *Duffalo* patents, when applied individually or collectively as alleged by the Examiner, fail to disclose or suggest every element for the combination of elements recited in Applicant's claims. For these reasons, independent claims 1 and 8 and their corresponding dependent claims are allowable.

The Office is reminded that the Office has the initial burden of establishing a **factual basis** to support the legal conclusion of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in KSR Int'l v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some **articulated reasoning with some rational underpinning** to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (emphasis added). Based on the foregoing discussion, withdrawal of this rejection is respectfully requested.

Based on at least the foregoing amendments and remarks, Applicant submit that claims 1-9 are allowable, and this application is in condition for allowance. Accordingly, Applicant request a favorable examination and consideration of the instant application. In the event the instant application can be placed in even better form, Applicant request that the undersigned attorney be contacted at the number below.

Respectfully submitted,

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